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## 1. GETTING STARTED

#### What's In The Box?

- 1 x G70™ Moving Head Spot
- An Ever-So-Handy Power Cord
- A Sweet Safety Cable & set of Mounting Brackets
- One really classy DMX cable
- This Lovely User Manual

### **Getting It Out Of The Box**

Congratulations on your purchase of the amazing  $G70^{\text{TM}}$  LED moving spot head. With a name like  $G70^{\text{TM}}$ , its gotta be good! Now that you've got your  $G70^{\text{TM}}$  (or hopefully, G70's!), you should carefully unpack the box and check the contents to ensure that all parts are present and in good condition. If anything looks as if it has been damaged in transit, notify the shipper immediately and keep the packing material for inspection. Again, please save the carton and all packing materials. If a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

### Powering Up!

All fixtures must be powered directly off a switched circuit and cannot be run off a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel is used solely for a 0% to 100% switch.

AC Voltage Switch - Not all fixtures have a voltage select switch, so please verify that the fixture you receive is suitable for your local power supply. See the label on the fixture or refer to the fixture's specifications chart for more information. A fixture's listed current rating is its average current draw under normal conditions. Check the fixture or device carefully to make sure that if a voltage selection switch exists that it is set to the correct line voltage you will use.

Warning! Verify that the voltage select switch on your unit matches the line voltage applied. Damage to your fixture may result if the line voltage applied does not match the voltage indicated on the voltage selector switch. All fixtures must be connected to circuits with a suitable Ground (Earthing).

#### **Getting A Hold Of Us**

If something is wrong, please just visit our website at www.blizzardlighting. com and open a support ticket. We'll be happy to help, honest.

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| Author:   | Date:     | Last Edited: | Date:     |
|-----------|-----------|--------------|-----------|
| J. Thomas | 7/12/2014 | J. Thomas    | 7/24/2014 |

## SAFETY INSTRUCTIONS



Please read these instructions carefully. They include important information about the installation, usage and maintenance of this product.

- Please keep this User Guide for future use. If you sell the unit to someone else, be sure that they also receive this User Guide.
- ALWAYS make sure that you are connecting to the proper voltage, and that
  the line voltage you are connecting to is not higher than that stated on the decal or rear panel of the fixture.
- This product is intended for indoor use only.
- To prevent risk of fire or shock, do not expose fixture to rain or moisture.
- Make sure there are no flammable materials close to the unit while operating.
- The unit must be installed in a location with adequate ventilation, at least 20in (50cm) from adjacent surfaces. Be sure that no ventilation slots are blocked.
- ALWAYS disconnect from the power source before servicing or replacing fuse and be sure to replace with same fuse size and type.
- ALWAYS secure fixture using a safety chain. NEVER carry the fixture by its head. Use its carrying handles.
- DO NOT operate at ambient temperatures higher than 104°F (40°C).
- In the event of a serious operating problem, stop using the unit immediately. NEVER try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center. Always use the same type spare parts.
- NEVER connect the device to a dimmer pack.
- Make sure the power cord is never crimped or damaged.
- Never disconnect the power cord by pulling or tugging on the cord.
- Avoid direct eye exposure to the light source while it is on.

**Caution!** There are no user serviceable parts inside the unit. Do not open the housing or attempt any repairs yourself. In the unlikely event your unit may require service, please open a support ticket at www. blizzardlighting.com/tickets.

## 2. MEET THE G70™ MOVING HEAD SPOT

#### **MAIN FEATURES**

- Compact Intelligent Moving Head Fixture
- 70W (7\* 10W) CREE® LED Source
- 7 Dichroic Colors (including UV) + White
- 11/14-Channel DMX Control Modes
- Pan: 540º/ Tilt: 270º (8-16 Bit Resolution)
- Dual Gobo Wheels
- Static Gobos: 7 Metal + Open
- Rotating Gobos: 2 Glass, 4 Metal + Open
- Rotating 3-Facet Prism
- Variable Electronic Dimmer (0 100%)
  Electronic Focus
- Gobo-Flow, Rainbow-Flow + Shake w/Bi-Directional Rotation
- Multiple Built-In Auto & Sound Activated Programs
- Cooling System: Forced Convection Cooling
- Housing: Flame-Retardant Plastic (V0)
- DMX-512, Auto, Sound Active, & Master-Slave

#### CONTROL:

- USITT DMX-512 (11/14 Channels)
- 3-pin Input/Output
- · 4-button menu with LCD icon-based display

### DMX Quick Reference (11/14-Channel Modes)

| Channel | Reduced Mode         | Channel | Standard Mode     |
|---------|----------------------|---------|-------------------|
| 1       | Pan                  | 1       | Pan               |
| 2       | Tilt                 | 2       | Fine Pan          |
| 3       | Color Wheel          | 3       | Tilt              |
| 4       | Gobo Wheel 1         | 4       | Fine Tilt         |
| 5       | Gobo Wheel 2         | 5       | Pan/Tilt Speed    |
| 6       | Gobo 2 Rotation      | 6       | Color Wheel       |
| 7       | Prism + Rotation     | 7       | Gobo Wheel 1      |
| 8       | Focus                | 8       | Gobo Wheel 2      |
| 9       | Dimmer               | 9       | Gobo 2 Rotation   |
| 10      | Strobe               | 10      | Prism + Rotation  |
| 11      | Built-in Programs 11 |         | Focus             |
|         |                      | 12      | Dimmer            |
|         |                      | 13      | Strobe            |
|         | 14 Built-in Progran  |         | Built-in Programs |

Figure 1: The G70™ Pin-Up Picture



**Figure 2: The Rear Connections** 



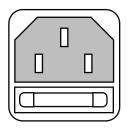
## 3. SETUP



Before replacing a fuse, disconnect power cord. ALWAYS replace with the same type and rating of fuse.

### **Fuse Replacement**

With a flat head screwdriver, wedge the fuse holder out of its housing. Remove the damaged fuse from its holder and replace with exact same type fuse. Insert the fuse holder back in its place and reconnect power.



### Connecting A Bunch of G70 Fixtures™

You will need a serial data link to run light shows using a DMX-512 controller or to run shows on two or more fixtures set to sync in master/slave operating mode. The combined number of channels required by all the fixtures on a serial data link determines the number of fixtures the data link can support.

Fixtures on a serial data link must be daisy chained in one single line. Also, connecting more than 32 fixtures on one serial data link without the use of a DMX optically-isolated splitter may result in deterioration of the digital DMX signal.

The maximum recommended cable-run distance is 500 meters (1640 ft). The maximum recommended number of fixtures on a serial data link is 32 fixtures.

## Data/DMX Cabling

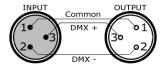
To link fixtures together you'll need data cables. You should use datagrade cables that can carry a high quality signal and are less prone to electromagnetic interference.

For instance, Belden© 9841 meets the specifications for EIA RS-485 applications. Standard microphone cables will "probably" be OK, but note that they cannot transmit DMX data as reliably over long distances. In any event, the cable should have the following characteristics:

2-conductor twisted pair plus a shield Maximum capacitance between conductors – 30 pF/ft. Maximum capacitance between conductor & shield – 55 pF/ft. Maximum resistance of 20 ohms / 1000 ft. Nominal impedance 100 – 140 ohms

#### **Cable Connectors**

Cables must have a male XLR connector on one end and a female XLR connector on the other end. (Duh!)



A Word on Termination: DMX is a resilient communication protocol, however errors still occasionally occur. Termination reduces signal errors, and therefore best practices include use of a terminator in all circumstances. If you are experiencing problems with erratic fixture behavior, especially over long signal cable runs, a terminator may help improve performance.

To build your own DMX Terminator: Obtain a 120-ohm, 1/4-watt resistor, and wire it between pins 2 & 3 of the last fixture. They are also readily available from specialty retailers.



**CAUTION:** Do not allow contact between the common and the fixture's chassis ground. Grounding the common can cause a ground loop, and your fixture may perform erratically. Test cables with an ohm meter to verify correct polarity and to make sure the pins are not grounded or shorted to the shield or each other.

#### 3-Pin??? 5-Pin??? Huh?!?

If you use a controller with a 5 pin DMX output connector, you will need to use a 5 pin to 3 pin adapter. They are widely available over the internet and from specialty retailers If you'd like to build your own, the chart below details a proper cable conversion:

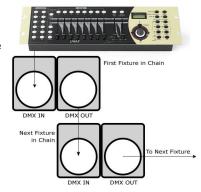
| Conductor     | 3-Pin Female<br>(Output) | 5-Pin Male<br>(Input) |
|---------------|--------------------------|-----------------------|
| Ground/Shield | Pin 1                    | Pin 1                 |
| DMX Data (-)  | Pin 2                    | Pin 2                 |
| DMX Data (+)  | Pin 3                    | Pin 3                 |
| Not Used.     | No Connection.           | No Connection.        |
| Not Used.     | No Connection.           | No Connection.        |

### Take It To The Next Level: Setting Up DMX Control

**Step 1:** Connect the male connector of the DMX cable to the female connector (output) on the controller.

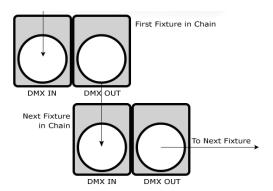
**Step 2:** Connect the female connector of the DMX cable to the first fixture's male connector (input). *Note:* It doesn't matter which fixture address is the first one connected. We recommend connecting the fixtures in terms of their proximity to the controller, rather than connecting the lowest fixture number first, and so on.

**Step 3:** Connect other fixtures in the chain from output to input as above. Place a DMX terminator on the output of the final fixture to ensure best communication.



### Fixture Linking (Master/Slave Mode)

- 1. Connect the (male) 3 pin connector side of the DMX cable to the output (female) 3 pin connector of the first fixture.
- 2. Connect the end of the cable coming from the first fixture which will have a (female) 3 pin connector to the input connector of the next fixture consisting of a (male) 3 pin connector. Then, proceed to connect from the output as stated above to the input of the following fixture and so on.



A quick note: Often, the setup for Master-Slave and Standalone operation requires that the first fixture in the chain be initialized for this purpose via either settings in the control panel or DIP-switches. Secondarily, the fixtures that follow may also require a slave setting.

Check the "**Operating Adjustments**" section in this manual for complete instructions for this type of setup and configuration.

## Mounting & Rigging

This fixture may be mounted in any SAFE position provided there is enough room for ventilation.

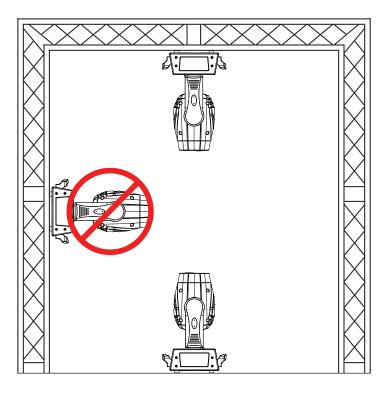
It is important never to obstruct the fan or vents pathway. Mount the fixture using a suitable "C" or "O" type clamp. The clamp should be rated to hold at least 10x the fixture's weight to ensure structural stability. Do not mount to surfaces with unknown strength, and ensure properly "rated" rigging is used when mounting fixtures overhead.

Adjust the angle of the fixture by loosening both knobs and tilting the fixture. After finding the desired position, retighten both knobs.

- When selecting installation location, take into consideration lamp replacement access (if applicable) and routine maintenance.
- Safety cables MUST ALWAYS be used.
- Never mount in places where the fixture will be exposed to rain, high humidity, extreme temperature changes or restricted ventilation.

### **Mounting Points**

Overhead mounting requires extensive experience, which includes calculating working load limits, knowledge of the installation material being used, and periodic safety inspection of all installation material and the fixture. If you lack these qualifications, do not attempt the installation yourself. Improper installation can result in bodily injury.



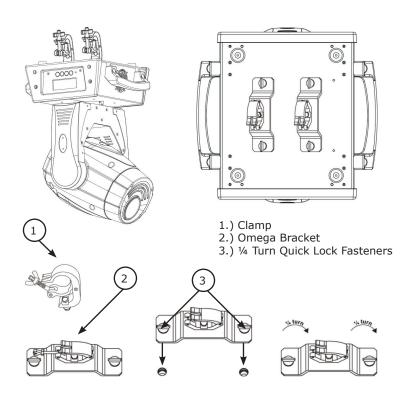
#### Caution!

Please be aware, you should have a qualified electrician performing all of your electrical connection needs. Better safe than sorry!

Be sure to complete all rigging and installation procedures before connecting the main power cord to the appropriate wall outlet.

### Clamp Mounting

This fixture provides a mounting bracket assembly that secures the bottom of the base, the "Omega Brackets," and the safety cable rigging point together. When mounting this fixture to truss, be sure to secure an appropriately rated clamp to the omega bracket using an M10 screw fitted through the center hole of the "omega bracket".



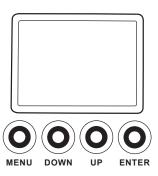
## **Securing the Fixture**

Regardless of the rigging option you choose for your fixtures always be sure to secure your fixture with a safety cable. Be sure to only use the designated rigging point found on the underside of the base assembly for the safety cable. Never secure a safety cable to a carrying handle.

## 4. OPERATING ADJUSTMENTS

#### The Control Panel

All the goodies and different modes possible with the  $G70^{\text{TM}}$  are accessed by using the control panel on the front of the fixture. There are 4 control buttons below the LCD display which allow you to navigate through the various control panel menus.



| Button          | Function   |
|-----------------|--|
| <menu></menu>   | Used to access the menu or to return to a previous menu option.    |
| <up></up>       | Scrolls through menu options in ascending order.                   |
| <down></down>   | Scrolls through menu options in descending order.                  |
| <enter></enter> | Used to select and store the current menu or option within a menu. |

Access control panel functions using the four panel buttons located directly underneath the LCD Display.

The Control Panel LCD Display shows the menu items you select from the menu map on page #11. When a menu function is selected, the display will show immediately the first available option for the selected menu function. To select a menu item, press **<ENTER>**.

Use the **<UP>** and **<DOWN>** buttons to navigate the menu map and menu options. Press the **<ENTER>** button to access the menu function currently displayed or to enable a menu option. To return to the previous option or menu without changing the value, press the **<MENU>** button.

## **Control Panel Menu Structure**

| Main Function | Sub Function   | Selection       | What It Does                                    |
|---------------|----------------|-----------------|---|
| Address       | N/A            | 001 <-> 512     | Sets the DMX address                            |
| System        | Channel Mode   | Standard        | 14-Channel DMX Mode                             |
|               |                | Reduced         | 11-Channel DMX Mode                             |
|               |                | Extended        | Same as standard mode, reserved for future use. |
|               | Language       | English         | English Language                                |
|               |                | 中文              | Chinese Language                                |
| Manual        | Lamp Control   | Turn on         | Reserved for future use, no function.           |
|               |                | Turn off        | Reserved for future use, no function.           |
|               | Lamp Power     | Full power      | Reserved for future use, no function.           |
|               |                | Half power      | Reserved for future use, no function.           |
|               | Reset          | Head Reset      | Reset the color & gobo wheels                   |
|               |                | P-T Reset       | Reset the pan & tilt motors                     |
|               |                | System Reset    | Full fixture reset                              |
|               | Channel        | Strobe          | Strobe Rate (slow <> fast), 000 = Lamp On       |
|               |                | Dimmer          | Dimmer (0% <> 100%)                             |
|               |                | Color           | Color Wheel (000-255), see DMX values (p.14)    |
|               |                | Gobo 1          | Gobo Wheel 1 (000-255), see DMX values (p.14)   |
|               |                | Gobo 2          | Gobo Wheel 2 (000-255), see DMX values (p.14)   |
|               |                | Gobo 2 Rotation | Gobo 2 Rotation (slow <> fast)                  |
|               |                | Prism           | Prism Effect (000-255), see DMX values (p.14)   |
|               |                | Focus           | Focus (0% <> 100%)                              |
|               |                | Pan             | Pan Adjustment (000-255)                        |
|               |                | Tilt            | Tilt Adjustment (000-255)                       |
| Run Mode      | Auto Program 1 | OK / Cancel     | Set the fixture to run Auto 1                   |
|               | Auto Program 2 | OK / Cancel     | Set the fixture to run Auto 2                   |
|               | Auto Program 3 | OK / Cancel     | Set the fixture to run Auto 3                   |
|               | Sound Mode     | OK / Cancel     | Set the fixture to run in Sound Active Mode     |
|               | DMX512 Mode    | OK / Cancel     | Set the fixture to run in DMX Mode              |
| Option        | Pan/Tilt       | Invert Pan      | Invert pan                                      |
|               |                | Invert Tilt     | Invert tilt                                     |
|               |                | Swap Pan-Tilt   | Invert the pan and tilt                         |
|               | Curve          | Curve 1         | Reserved for future use, no function.           |
|               |                | Curve 2         | Reserved for future use, no function.           |
|               |                | Curve 3         | Reserved for future use, no function.           |
|               | Display        | Normal          | Normal LCD display                              |
|               |                | Turn Over       | Flip the LCD display                            |
| Information   |                | <enter></enter> | Software version / DMX channel display          |

## **DMX Channel Values In-Depth**

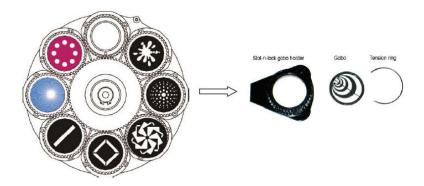
| Reduced<br>Mode | Standard<br>Mode | Channel<br>Value   | What it does  |  |
|-----------------|------------------|--|---|--|
| 1               | 1                | 000 <-> 255  | Pan   |  |
|                 | 2                | 000 <-> 255  | Pan Fine (16-Bit Pan)   |  |
| 2               | 3                | 000 <-> 255  | Tilt  |  |
|                 | 4                | 000 <-> 255  | Tilt Fine (16-Bit Tilt)   |  |
|                 | 5                | 000 <-> 255  | Movement Speed (fast <> slow)   |  |
| 3               | 6                | 000 <-> 009<br>010 <-> 019<br>020 <-> 029<br>030 <-> 039<br>040 <-> 049<br>050 <-> 059<br>060 <-> 069<br>070 <-> 079<br>080 <-> 099<br>100 <-> 119<br>120 <-> 139<br>140 <-> 159<br>160 <-> 179<br>180 <-> 199<br>200 <-> 219<br>220 <-> 255 | Color Wheel Open / White Magenta Orange Green Blue Red Yellow UV UV <> Yellow Yellow <> Red Red <> Blue Blue <> Green Orange Orange <> Wagenta Magenta Magenta <> White Rainbow Effect (slow <> fast)   |  |
| 4               | 7                | 000 <-> 010<br>011 <-> 020<br>021 <-> 030<br>031 <-> 040<br>041 <-> 050<br>051 <-> 060<br>061 <-> 070<br>071 <-> 080<br>081 <-> 095<br>096 <-> 110<br>111 <-> 125<br>126 <-> 140<br>141 <-> 155<br>156 <-> 171<br>171 <-> 185<br>186 <-> 255 | Gobo Wheel #1 No Gobo Gobo 1 Gobo 2 Gobo 3 Gobo 4 Gobo 5 Gobo 6 Gobo 7 Gobo 1 Shake Gobo 2 Shake Gobo 3 Shake Gobo 5 Shake Gobo 5 Shake Gobo 5 Shake Gobo 5 Shake Gobo 6 Shake Gobo 7 Shake Gobo 7 Shake Gobo 5 Shake Gobo 5 Shake Gobo 6 Shake Gobo 6 Shake Gobo 6 Shake Gobo 7 Shake Flow Effect (slow <> fast) |  |
| 5               | 8                | 000 <-> 010<br>011 <-> 020<br>021 <-> 030<br>031 <-> 040<br>041 <-> 050<br>051 <-> 060<br>061 <-> 070<br>071 <-> 085<br>086 <-> 100<br>101 <-> 115<br>116 <-> 130<br>131 <-> 145<br>146 <-> 160<br>161 <-> 255                               | Gobo Wheel #2 No Gobo Gobo 1 Gobo 2 Gobo 3 Gobo 4 Gobo 5 Gobo 6 Gobo 1 Shake Gobo 2 Shake Gobo 4 Shake Gobo 4 Shake Gobo 5 Shake Gobo 5 Shake Gobo 6 Shake Flow Effect (slow <> fast)   |  |
| 6               | 9                | 000 <-> 127<br>128 <-> 189<br>190 <-> 193<br>194 <-> 255   | Gobo Wheel #2 Rotation Gobo Indexing Counter-Clockwise Rotation (fast <-> slow) Rotation Stop Clockwise Rotation (slow <-> fast)  |  |
| 7               | 10               | 000 <-> 005<br>006 <-> 009<br>010 <-> 127<br>128 <-> 137<br>138 <-> 255  | Prism & Prism Rotation No Function Prism Effect Clockwise Rotation (slow <-> fast) Stop CCW Rotation (slow <-> fast)  |  |

### **DMX Channel Values In-Depth (Continued)**

| Reduced<br>Mode | Standard<br>Mode | Channel<br>Value  | What it does  |
|-----------------|------------------|---|---|
| 8               | 11               | 000 <-> 255   | Focus (0% <> 100%)  |
| 9               | 12               | 000 <-> 255   | Dimmer (0% <> 100%)   |
| 10              | 13               | 011 <-> 115<br>116 <-> 165<br>166 <-> 170<br>171 <-> 220<br>221 <-> 230 | Strobe (fast <-> slow) Open Ramp Up (slow <-> fast) Open Ramp Down (slow <-> fast) Open Ramo Down (slow <-> fast) Open Random strobe effect |
| 11              | 14               | 150 <-> 159<br>160 <-> 169<br>170 <-> 179<br>180 <-> 189                | Auto Program 1 Auto Program 2 Auto Program 3 No function Sound Active Mode System Reset   |

### **Gobo Replacement**

- 1) Remove the gobo cover by removing the four screws on the top of the fixture head.
- 2) Remove the slot-n-lock gobo from the gobo wheel by lifting up slightly and sliding it out.
- 3) Using a small tool, pry the tension ring from the gobo holder.
- 4) Remove the old gobo, insert the new gobo, and replace in the reverse steps of removal.



## **Troubleshooting**

| Symptom  | Solution   |
|--|--|
| Fixture Auto-<br>Shut Off                                  | Check the fan in the fixture. If it is stopped or moving slower than normal, the unit may have shut itself off due to high heat. This is to protect the fixture from overheating. Clear the fan of obstructions, or return the unit for service. |
| Beam is Dim  | Check optical system and clean excess dust/grime. Also ensure that the 220V/110V switch is in the correct position, if applicable.   |
| No Light Output  | Check to ensure fixture is operating under correct mode, IE sound active/auto/DMX/Etc., if applicable. Contact service for more information.   |
| Chase Speed<br>Too Fast/Slow                               | Check to ensure proper setup of speed adjustment.  |
| No Power   | Check fuse, AC cord and circuit for malfunction.   |
| Blown Fuse   | Check AC cord and circuit for damage, verify that moving parts are not restricted and that unit's ventilation is not obstructed  |
| Slow Movement  | Verify that 220V/110V switch is in the correct position, if applicable. Also check that speed channels are set appropriately.  |
| No Response to Audio                                       | Verify that the fixture is in "Sound Active" mode.<br>Adjust Audio Sensitivity, If Applicable.   |
| Fixture Not<br>Responding /<br>Responding Er-<br>ratically | Make sure all connectors are seated properly and securely. Use Only DMX Cables. Install a Terminator. Check all cables for defects. Reset fixture(s).  |
| Intermittent<br>Lamp                                       | Check lamp for properly installation.<br>Relamp, lamp may have reached end of life.  |
| Fixture Moving<br>On Its Own                               | Verify proper mode of operation. Is the fixture in "Auto" mode?  |

If your problem isn't listed, or if problems persist, please open a support ticket at www.blizzardlighting.com/tickets.

## 5. APPENDIX

### A Quick Lesson On DMX

DMX (aka DMX-512) was created in 1986 by the United States Institute for Theatre Technology (USITT) as a standardized method for connecting lighting consoles to lighting dimmer modules. It was revised in 1990 and again in 2000 to allow more flexibility. The Entertainment Services and Technology Association (ESTA) has since assumed control over the DMX512 standard. It has also been approved and recognized for ANSI standard classification.

DMX covers (and is an abbreviation for) Digital MultipleXed signals. It is the most common communications standard used by lighting and related stage equipment.

DMX provides up to 512 control "channels" per data link. Each of these channels was originally intended to control lamp dimmer levels. You can think of it as 512 faders on a lighting console, connected to 512 light bulbs. Each slider's position is sent over the data link as an 8-bit number having a value between 0 and 255. The value 0 corresponds to the light bulb being completely off while 255 corresponds to the light bulb being fully on.

DMX data is transmitted at 250,000 bits per second using the RS-485 transmission standard over two wires. As with microphone cables, a grounded cable shield is used to prevent interference with other signals.

There are five pins on a DMX connector: a wire for ground (cable shield), two wires for "Primary" communication which goes from a DMX source to a DMX receiver, and two wires for a "Secondary" communication which goes from a DMX receiver back to a DMX source. Generally, the "Secondary" channel is not used so data flows only from sources to receivers. Hence, most of us are most familiar with DMX-512 as being employer over typical 3-pin "mic cables," although this does not conform to the defined standard.

DMX is connected using a daisy-chain configuration where the source connects to the input of the first device, the output of the first device connects to the input of the next device, and so on. The standard allows for up to 32 devices on a single DMX link.

Each receiving device typically has a means for setting the "starting channel number" that it will respond to. For example, if two 6-channel fixtures are used, the first fixture might be set to start at channel 1 so it would respond to DMX channels 1 through 6, and the next fixture would be set to start at channel 7 so it would respond to channels 7 through 12.

The greatest strength of the DMX communications protocol is that it is very simple and robust. It involves transmitting a reset condition (indicating the start of a new "packet"), a start code, and up to 512 bytes of data. Data packets are transmitted continuously. As soon as one packet is finished, another can begin with no delay if desired (usually another follows within 1 ms). If nothing is changing (i.e. no lamp levels change) the same data will be sent out over and over again. This is a great feature of DMX -- if for some reason the data is not interpreted the first time around, it will be re-sent shortly.

Not all 512 channels need to be output per packet, and in fact, it is very uncommon to find all 512 used. The fewer channels are used, the higher the "refresh" rate. It is possible to get DMX refreshes at around 1000 times per second if only 24 channels are being transmitted. If all 512 channels are being transmitted, the refresh rate is around 44 times per second.

In summary, since its design and evolution in the 1980's DMX has become the standard for lighting control. It is flexible, robust, and scalable, and its ability to control everything from dimmer packs to moving lights to foggers to lasers makes it an indispensable tool for any lighting designer or lighting performer.

#### Keeping Your G70 As Good As New

The fixture you've received is a rugged, tough piece of pro lighting equipment, and as long as you take care of it, it will take care of you. That said, like anything, you'll need to take care of it if you want it to operate as designed. You should absolutely keep the fixture clean, especially if you are using it in an environment with a lot of dust, fog, haze, wild animals, wild teenagers or spilled drinks.

Cleaning the optics routinely with a suitable glass cleaner will greatly improve the quality of light output. Keeping the fans free of dust and debris will keep the fixture running cool and prevent damage from overheating.

In transit, keep the fixtures in cases. You wouldn't throw a prized guitar, drumset, or other piece of expensive gear into a gear trailer without a case, and similarly, you shouldn't even think about doing it with your shiny new light fixtures.

Common sense and taking care of your fixtures will be the single biggest thing you can do to keep them running at peak performance and let you worry about designing a great light show, putting on a great concert, or maximizing your client's satisfaction and "wow factor." That's what it's all about, after all!

### Returns (Gasp!)

We've taken a lot of precautions to make sure you never even have to worry about sending a defective unit back, or sending a unit in for service. But, like any complex piece of equipment designed and built by humans, once in a while, something doesn't go as planned. If you find yourself with a fixture that isn't behaving like a good little fixture should, you'll need to obtain a Return Authorization (RA).

Don't worry, this is easy. Just go to our website and open a support ticket at www.blizzardlighting.com/tickets, and we'll issue you an RA. Then, you'll need to send the unit to us using a trackable, pre-paid freight method. We suggest using USPS Priority or UPS. Make sure you carefully pack the fixture for transit, and whenever possible, use the original box & packing for shipping.

When returning your fixture for service, be sure to include the following:

- 1.) Your contact information (Name, Address, Phone Number, Email address).
- 2.) The RA# issued to you
- 3.) A brief description of the problem/symptoms.

We will, at our discretion, repair or replace the fixture. Please remember that any shipping damage which occurs in transit to us is the customer's responsibility, so pack it well!

#### **Shipping Issues**

Damage incurred in shipping is the responsibility of the shipper, and must be reported to the carrier immediately upon receipt of the items. Claims must be made within seven (7) days of receipt.

#### Tech Specs!

| Weight & Dimensions       |  |  |  |
|---------------------------|--|--|--|
| Width                     | 13.3 inches (341 mm)   |  |  |
| Depth                     | 10.5 inches (265 mm)   |  |  |
| Height                    | 21.5 inches (546 mm)   |  |  |
| Weight                    | 33.1 lbs (15 kg)   |  |  |
| Power                     |  |  |  |
| Operating Voltage         | 90-260VAC 50/60Hz (autoranging)  |  |  |
| Power Consumption         | 119w, 1.58a, pf:.61  |  |  |
| Fuse                      | 3A, 250V   |  |  |
| Light Source              |  |  |  |
| LED                       | 70W (7* 10W) CREE® LED Source  |  |  |
| Optical                   |  |  |  |
| Beam Angle                | 15 degree  |  |  |
| Luminous Intensity        | 45,300 Lux @ 1m   8,300 Lux @ 2m   |  |  |
| Movement Range            |  |  |  |
| Pan                       | 540 degrees  |  |  |
| Tilt                      | 270 degrees  |  |  |
| Thermal                   |  |  |  |
| Max. Operating Temp.      | 104 degrees F (40 degrees C) ambient   |  |  |
| Control                   |  |  |  |
| Protocol                  | USITT DMX-512  |  |  |
| DMX Channels              | 11/14 channel  |  |  |
| Input                     | 3-pin XLR Male   |  |  |
| Output                    | 3-pin XLR Female   |  |  |
| Other Information         |  |  |  |
| For the price of just one | e cup of coffee you can feed a child a coffee.                                 |  |  |
| Warranty                  | 2-year limited warranty, does not cover malfunction caused by damage to LED's. |  |  |

#### DISCLAIMER:

The power connector fitted to the fixture and fixture cord are designed for compatibility with products manufactured by Neutrik AG, Neutrik USA and their related entities, however they are not manufactured by, affiliated with or endorsed by Neutrik AG, Neutrik USA, or any related entity. Neutrik® and powerCON® are registered trademarks of Neutrik AG.



Enjoy your product!
Our sincerest thanks for your purchase!
--The team @ Blizzard Lighting